

ABSTRACT

Methods, compositions and articles of manufacture involving soluble conjugated polymers are provided. The conjugated polymers have a sufficient density of polar substituents to render them soluble in a polar medium, for example water and/or methanol. The conjugated polymer may desirably comprise monomers which alter its conductivity properties. In some embodiments, the inventors have provided cationic conjugated polymers (CCPs) comprising both solubilizing groups and conductive groups, resulting in conductive conjugated polymers soluble in polar media. The different solubility properties of these polymers allow their deposition in solution in multilayer formats with other conjugated polymers. Also provided are articles of manufacture comprising multiple layers of conjugated polymers having differing solubility characteristics. Embodiments of the invention are described further herein.